

REMARKS

Initially applicants would like to thank Examiner Di Grazio for granting an interview and for her time spent in the interview. Applicants would also like to thank Primary Examiner Chowdhury for participating in the interview and for his time spent in the interview.

Claims 1, 3-9 and 11-15 are pending in the application.

Claim 13 is amended to more clearly define the projecting portion to address the 35 USC §112, second paragraph rejection noted in the Official Action.

The Official Action has indicated that the Action is final. Reconsideration and withdrawal of the finality of the rejection are respectfully requested for the following reason.

MPEP §706.07(a) provides that a second or subsequent action on the merits shall be final, except where the Examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims nor based on information submitted in an Information Disclosure Statement.

Page 6 of the Official Action indicates that applicants' amendment necessitated the new grounds of rejection. However, applicants' amendment combined claim 2 with independent claim 1 and combined claim 10 with independent claim 9. Accordingly, no new issues were presented. Since the Official Action indicated that the arguments presented in the amendment of

January 29, 2004 overcome the initial grounds of rejection and since the amendment combines two claims previously presented, the finality of the rejection is believed premature and withdrawal of the finality of the rejection is respectfully requested. Specifically, the new grounds of rejection are based on the previous arguments overcoming the previous cited art, not any amendment that removed the references and necessitated new references be applied.

Claims 1, 3-9, 11 and 12-15 are rejected as unpatentable over SHIMADA et al. 6,147,722 in view of ZHANG et al. 6,115,088. This rejection is respectfully traversed.

As noted in the Official Action, SHIMADA et al. do not appear to teach that the insulating layer is formed of a plurality of laminated insulating films and that the insulating films have openings individually which form a contact hole in a tapered shape as a whole. ZHANG et al. is offered in an attempt to overcome this shortcoming. ZHANG et al. in column 4, line 66 through column 5, line 9 in conjunction with Figures 9B and 9C teach an insulating film made of laminate films 904 and 905.

The position set forth in the Official Action is that it would be obvious to one of ordinary skill in the art to use the laminated insulating films of ZHANG et al. and a tapered shaped contact hole to contribute to a display in which a drop in pixel aperture ratio is prevented and cross-talk is suppressed.

However, applicants have thoroughly reviewed ZHANG et al. and are unable to discern any teaching regarding a tapered shape contact hole. Specifically, as seen in Figure 9C of ZHANG et al., for example, contact hole 111 has parallel sides. In addition, source line 105 is in contact hole 111 as seen in Figure 10 of ZHANG et al, not that the pixel electrode is formed on the insulating layer and electrically connected to the end portion of a wiring through the contact hole as recited in claim 1.

Further, as pointed out at the interview, column 5, lines 29-32 of ZHANG et al. teach that by overlapping the edge of the pixel electrode 107 (as seen in Figure 10 of ZHANG et al.) with the source line and the gate line, the overlapped region functions as a black matrix. Thereby, the aperture ratio may be increased to the maximum. Accordingly, it is the overlap of the pixel electrode 107 with source line 105 that maximizes the aperture ratio. The laminated insulating layer 904,905, which is beneath the source line, and for which ZHANG et al. is offered does not appear to affect the aperture ratio.

Column 5, lines 33-47 of ZHANG et al. further discloses that a required capacity may be obtained without dropping the aperture ratio by forming the auxiliary capacitor 908 between pattern 106 made of ITO and the pixel electrode 107. The

laminated insulating layer is not between these two layers and thus would not appear to affect the capacity.

As also pointed out at the interview, ZHANG et al. further teach that the auxiliary capacitor 908 allows the ITO pattern 106 to function as a shield for electrically shielding the pixel electrode 107 from the source line 105 such that cross-talk between the source line 105 and pixel electrode 107 may be suppressed.

Accordingly, the plural laminated films of ZHANG et al. neither affect the aperture ratio nor the cross-talk. Rather, it is the presence of ITO pattern 106 that affects aperture ratio and cross-talk. Therefore, the motivation for combining ZHANG et al. with SHIMADA et al. as offered in the Official Action would not lead one of ordinary skill in the art to include a plurality of laminated films in an insulating layer.

In order to maximize the aperture ratio and prevent cross-talk, one of ordinary skill in the art upon reading ZHANG et al. would be motivated to overlap the edge of the pixel electrode with the source line. Such teaching is opposite that to which is taught by SHIMADA et al. Specifically, SHIMADA et al. directly contacts the pixel electrode 140 with source line 132 as seen in Figure 28 of SHIMADA et al.

As set forth above, the motivation provided in the Official Action is not relevant to the elements for which they are offered.

In addition, the elements for which the motivation is relevant are based on opposite teachings such that ZHANG et al. teach a capacitance formed between the pixel electrode and the source line and SHIMADA et al. teach a direct connection between the pixel electrode and the source line such that no capacitance would be created.

Further, as pointed out at the interview, the insulating layer in question is arranged such that the pixel electrode is on the insulating layer. The pixel electrode 107 of ZHANG et al. is on layer 907, not on laminated layers 904, 905. Layer 907 is neither a laminated layer nor has a contact hole there through so that the pixel electrode is in contact with the wiring through the contact hole as required by claim 1.

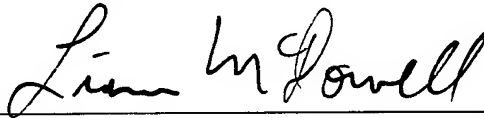
Accordingly, one of ordinary skill in the art would not be motivated to combine the references in the manner suggested. Therefore, claims 1, 3-9, 11 and 12-15 are believed patentable over SHIMADA et al. in view of ZHANG et al.

In view of the present amendment and the foregoing remarks, it is believed that the present application has been placed in condition for allowance. Reconsideration and allowance are respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. §1.16 or under 37 C.F.R. §1.17.

Respectfully submitted,

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